(No Model.) 2 Sheets—Sheet 1.

J. D. LIBEY.

SCRAPER.

No. 529,925. Patented Nov. 27, 1894.

Fig. 1.

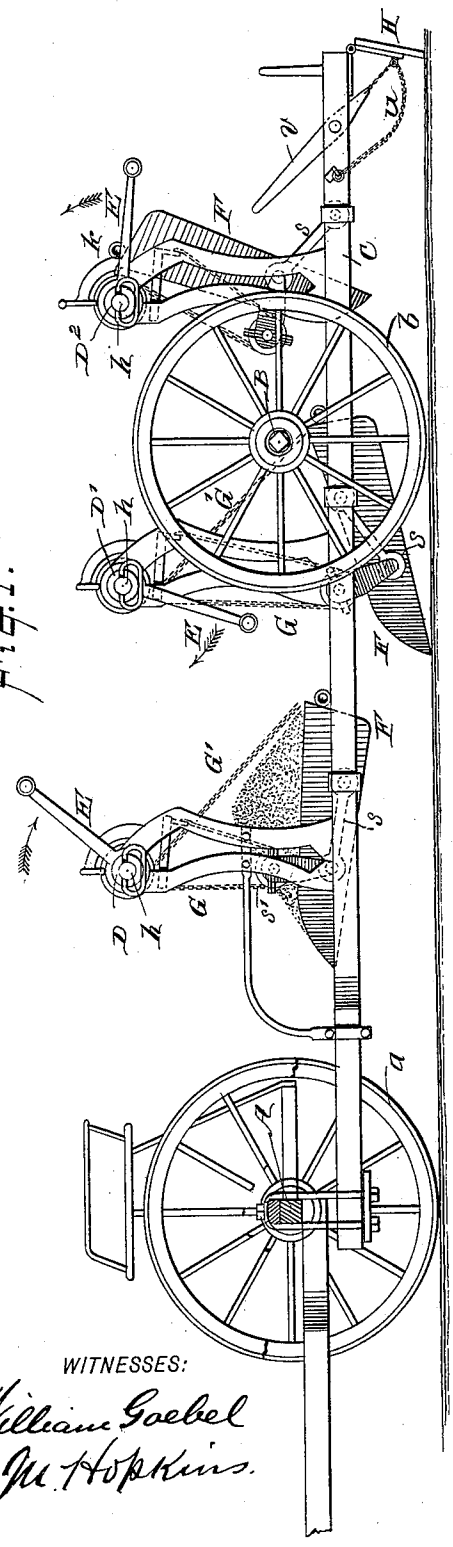
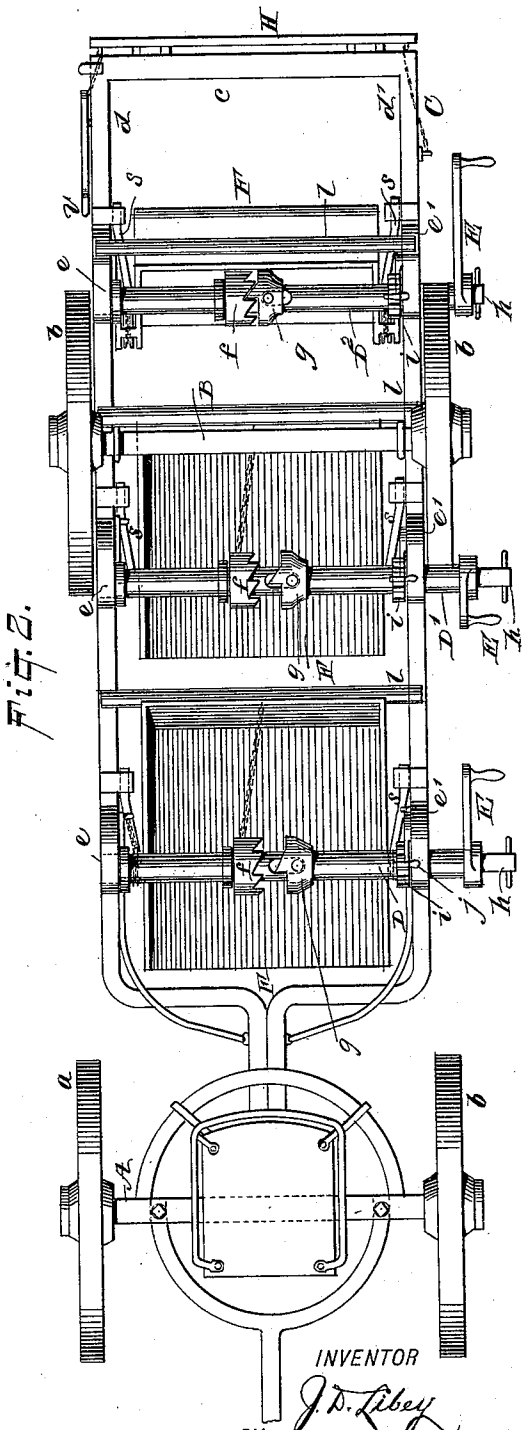


Fig. 2.



WITNESSES:

William Goebel

E. M. Hopkins.

INVENTOR

J. D. Libey

BY Munn & Co

ATTORNEYS.

(No Model.) 2 Sheets—Sheet 2.

J. D. LIBEY.

SCRAPER.

No. 529,925. Patented Nov. 27, 1894.

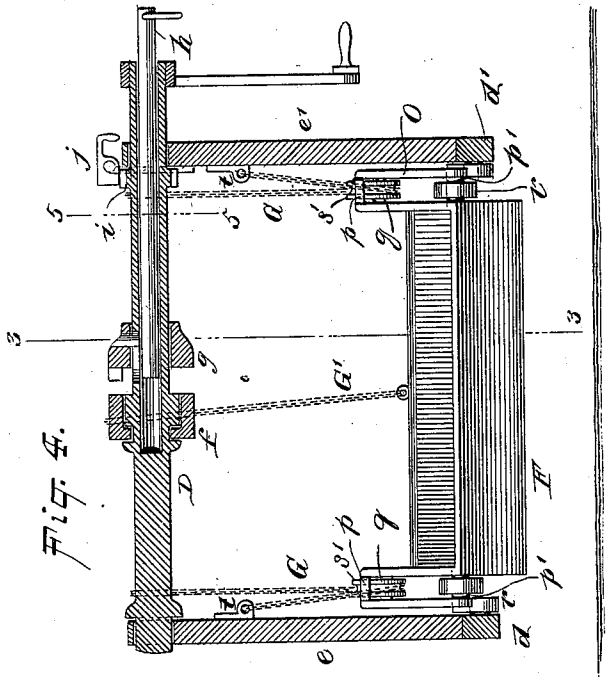


Fig. 4.

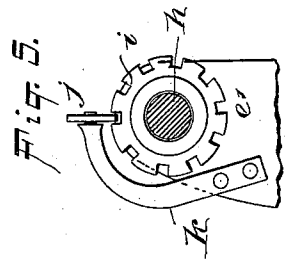


Fig. 5.

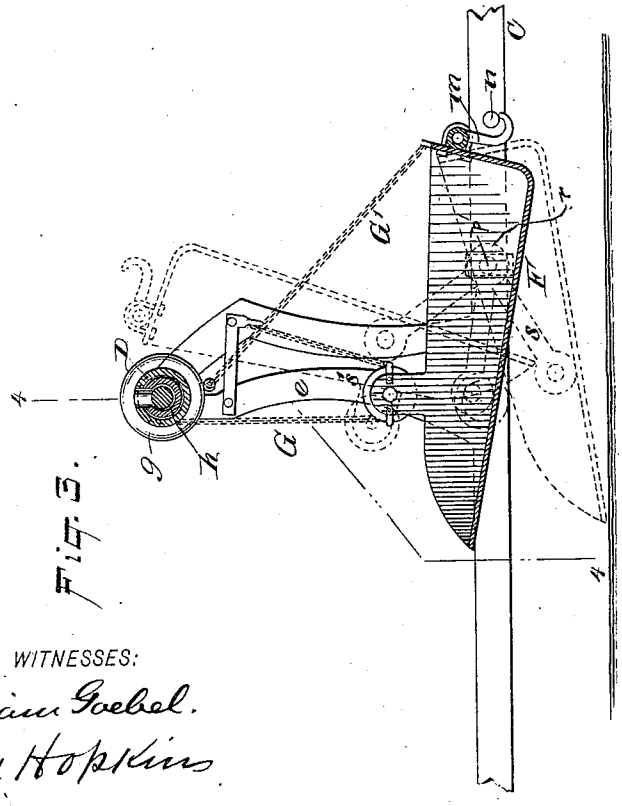


Fig. 3.

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UNITED STATES PATENT OFFICE.

JOHN D. LIBEY, OF LIMA, INDIANA.

SCRAPER.

SPECIFICATION forming part of Letters Patent No. 529,925, dated November 27, 1894.

Application filed May 31, 1894. Serial No. 513,037. (No model.)

To all whom it may concern:

Be it known that I, JOHN D. LIBEY, of Lima, in the county of Lagrange and State of Indiana, have invented a new and Improved Scraper, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a side-elevation of my improved scraper. Fig. 2 is a plan view. Fig. 3 is a vertical longitudinal section taken on line 3—3 in Fig. 4, of one of the scrapers, showing it in full lines in position for carrying a load, and in two positions in dotted lines, one showing the scraper adjusted for taking up earth, and the other showing the scraper in a vertical position, which is its normal position when not in use. Fig. 4 is a vertical section taken on line 4—4 in Fig. 3; and Fig. 5 is a vertical section taken on line 5—5 in Fig. 4.

Similar letters of reference indicate corresponding parts in all the views.

The object of my invention is to provide an efficient scraper for taking up, carrying and depositing earth, the machine being constructed for easy operation by one man.

Although my improved scraper is more particularly designed for road work, it may be used wherever earth is to be leveled or removed.

The axles A, B, are provided with wagon wheels *a*, *b*, of the usual description, which are preferably all of one size, and from the axle B is suspended the rear portion of the frame C which supports the scrapers and mechanism for operating them. The front end of the frame C is connected pivotally with the front axle, so that the said axle may swing in the same manner as a wagon axle.

The frame C is formed of a rear cross bar *c*, and the side pieces *d d'*, which are offset at their forward ends and fastened together behind the front axle A. In the present case I have shown an implement provided with three scrapers, but I do not limit or confine myself to this number. To the side bars *d d'* of the frame C, are secured standards *e e e e' e' e'*, and in the upper ends of the said standards are journaled shafts D, D', D^2. The said shafts are bored longitudinally to a point beyond their mid-length. On the said shafts, at or near the middle, is loosely placed a collar *f*, having clutch teeth formed on one side thereof, and on the shaft adjoining the collar *f* is placed a collar *g*, which is provided with a single tooth which engages the teeth of the collar *f*. The collar *g* is connected with a rod *h*, extending into the central bore of the shaft D, by means of a transverse pin passing through the collar, through slots in the shaft D, and through the rod *h*. On the outer end of the shaft D from which the rod *h* protrudes, is placed a crank E, by which the said shaft D is turned, and upon the same end of this shaft inside of the standard *e'*, is placed a notched wheel *i*, which is capable of being engaged by the detent *j*, pivoted to the arm *k* projecting from the standard *e'*.

The scraper F is provided at its rear end with a cross bar *l*, which normally rests upon the cross bars *d d'* of the frame C, and to the said bar are attached downwardly-projecting hooks *m*, which are capable of engaging studs *n* projecting inwardly from the said bars *d d'*. To the sides of the scraper F, near its open end is attached a plate *o*, by studs, U-shaped stirrup pieces *p* connecting the upper end of the said plate with an upward projection upon the side of the scoop, the lower end of the plate being connected with the side of the scoop by a stud *p'*. On the stud *p'* is placed an eye *r*, formed on the link *s*, an eye upon the other end of the link being pivotally connected with the bar *d* or *d'*. On the stud *q* on either side of the scrapers is placed a sheave *s'*, and to eyes *t* projecting from the inner side of the standards *e e'*, are attached chains G, which extend downwardly underneath the sheaves *s'*, thence upwardly, and are attached by their upper ends to the shaft D. To the rear end of the scraper F is attached one end of a chain G', the other end of which is secured to the collar *f*.

The rear end of the frame C is provided with a hinged board H, which is capable of being let down to a vertical position, as shown in Fig. 1. The rearward motion of the hinged board is limited by chains *u*, attached to the board and to the side pieces of the frame C. To one side of the frame C is pivoted a lever *v*, which is connected with the hinged board H by chains and serves to draw the said board up from the ground when it is not in use.

The description of the construction of the first scraper F, and mechanism for moving the same, will answer for the other scrapers.

The operation of my improved scraper is as follows: When it is desired to take up earth, the chains G, G′, are slackened and the machine is drawn forward. When the scraper is full the front end thereof is lifted by winding the chains G on the shaft D, by turning in a right handed direction or toward the rear of the machine. The detent *j* is then brought into engagement with the notched wheel *i*, thus holding the scraper in an elevated position. After the machine has been drawn to the place for dumping, the rod *h* is pushed inwardly, bringing the tooth on the collar *g* into engagement with the toothed collar *f*, thus causing the said collar to turn with the shaft D and take up the chains G′ when the crank is turned in a left handed direction, or toward the front of the machine. This operation lifts the rear end of the scraper, while the unwinding of the chains G lowers the front end of the scraper. When the inclination is sufficient the earth slides from the scraper.

It will be observed that the strain consequent upon the forward movement of the scraper is taken by the link *s*, and the scraper is prevented from rising at the rear by the engagement of the hook *m* with the studs *n*.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A scraper, supported on wheels, and provided with a movable link constituting an adjustable fulcrum, a fixed rear fulcrum for the scraper and hooks attached to the scraper, for engaging the same, mechanism for raising, lowering and tilting the scraper, and a supporting frame supported below the axles, as herein specified.

2. In a scraper, the combination of a wheel-supported frame provided with standards, a scraper pivotally connected with the frame, and a double windlass formed of two parts constructed for joint or separate action and constructed to raise the front or rear of the scraper, and a scraper-supporting-frame suspended below the axles substantially as specified.

3. In a scraper, the combination, of the wheel-supported frame C provided with the standards *e e′*, the shaft D journaled in the standards, the scraper F and links *s* connecting the same with the frame C, the loose collar *f* and means for connecting the collar with the shaft D, the chain G′ connecting the collar *f* and the rear end of the scraper, and the chain G connecting the front of the scraper with the shaft D, substantially as specified.

4. The combination, with the frame C provided with adjustable scrapers F, of the hinged leveling board H, and lever *b* for operating the same, substantially as specified.

JOHN D. LIBEY.

Witnesses:
GRACE LIBEY,
GEORGE W. EDGCOMB.